

CLAIMS

1. A method for manufacturing a printed wiring board having a conductor circuit or conductor circuits on one side or both 5 sides of an insulating substrate, and comprising a via hole which extends from one side of said insulating substrate to another side having the conductor circuit formed thereon, characterized by comprising the steps of:

(1) forming an opening extending from one side of said 10 insulating substrate to the conductor circuit;

(2) filling a predetermined amount of conductive paste into said opening; and

(3) pressurizing said conductive paste under a condition 15 of reduced pressure.

2. The method for manufacturing a printed wiring board according to claim 1, characterized in that: in said step (2), only a predetermined amount of a conductive paste of low viscosity is injected into said 20 opening; and characterized by filling a conductive paste of high viscosity stacking over the injected conductive paste of low viscosity.

3. The method for manufacturing a printed wiring board 25 according to claim 1, characterized in that a conductive bump formed by said conductive paste pressurized by said step (3) and protruding from one side of said insulating substrate is

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made non-concave in a surface side making contact with another printed wiring board.

4. The method for manufacturing a printed wiring board  
5 according to claim 1, wherein in said step (1), with a protective film bonded to one side of said insulating substrate, a laser beam is applied to the protective film from above it to form said opening, and characterized by comprising, after said step (3), the steps of:

10 (4) peeling said protective film to expose said conductive paste, forming a resin bonding-agent layer in a half-cured state on one side of said insulating substrate, and heating and press-bonding copper foil via the resin bonding-agent layer to establish an electrical connection between said conductive  
15 paste and said copper foil; and

(5) etching said copper foil to form conductor circuits on both sides of said insulating substrate.

5. The method for manufacturing a printed wiring board  
20 according to claim 1, characterized in that in said step (1), after a resin bonding-agent layer is formed in a half-cured state on one side of said insulating substrate and a protective film is made adhere to the resin bonding-agent layer, a laser beam is applied to the protective film from above it to form  
25 an opening extending to said conductor circuit, and characterized by comprising, after said step (3), the steps of:

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5 (6) peeling said protective film to expose said conductive paste, and heating and press-bonding copper foil over the conductive paste to establish an electrical connection between said conductive paste and said copper foil; and

5 (7) etching said copper foil to form conductive circuits on both sides of said insulating substrate.

6. The method for manufacturing a printed wiring board according to claim 1, characterized in that said conductive 10 paste of said step (2) contains a conductive filler and a binder obtained by dissolving a thermosetting resin in a solid state at room temperature into solvent.

7. The method for manufacturing a printed wiring board 15 according to claim 1, characterized in that:

in said step (1), after a resin bonding-agent layer in a half-cured state is formed on one side of said insulating substrate and a protective film is made adhere to the resin bonding-agent layer, a laser beam is applied to the protective 20 film from above it to form an opening extending to said conductor circuit; and

in said step (2), a predetermined amount of a conductive paste of low viscosity is injected into said opening, stacking over the filled conductive paste of low viscosity, wherein 25 the conductive paste of low viscosity contains a conductive filler and a binder obtained by dissolving a thermosetting resin in a solid state at room temperature into solvent, and the conductive paste of high viscosity contains a binder

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obtained by dissolving a conductive filler and a thermosetting resin in a solid state at room temperature into solvent; and  
a conductive bump formed by said conductive paste pressurized by said step (3) and protruding from one side of  
5 said insulating substrate is made non-concave in a surface side making contact with copper foil or another printed wiring board,

and characterized by comprising thereafter a step of, peeling said protective film to expose said conductive  
10 paste, forming a resin bonding-agent layer in the half-cured state on one side of said insulating substrate, and heating and press-bonding said copper foil or another printed wiring board via the resin bonding-agent layer to establish an electrical connection between said conductive paste and said  
15 copper foil.

8. The method for manufacturing a printed wiring board according to claim 1, characterized in that:

in said step (1), with a protective film bonded to one  
20 side of said insulating substrate, a laser beam is applied to the protective film from above it to form said opening,

in said step (2), a predetermined amount of a conductive paste of low viscosity is injected into said opening, stacking over the filled conductive paste of low viscosity, wherein  
25 the conductive paste of low viscosity contains a conductive filler and a binder obtained by dissolving a thermosetting resin in a solid state at room temperature into solvent, and the conductive paste of high viscosity contains a binder

obtained by dissolving a conductive filler and a thermosetting resin in a solid state at room temperature into solvent, and a conductive bump formed by said conductive paste pressurized by said step (3) and protruding from one side of said insulating substrate is made non-concave in a surface side making contact with copper foil or another printed wiring board,

and characterized by comprising thereafter a step of,  
(4) peeling said protective film to expose said conductive  
10 paste, and heating and press-bonding copper foil or another  
printed wiring board over the conductive paste to establish  
an electrical connection between said conductive paste and  
said copper foil.